

## WHAT IS CLAIMED IS:

1. An image data recording apparatus comprising:  
coding means for encoding image data using a  
buffer memory;  
5 buffer occupation amount detection means for,  
upon coding by said coding means, detecting a code  
amount of said image data occupying said buffer memory,  
and outputting buffer information related to the  
detected code amount of said image data; and  
10 recording means for recording said coded image  
data and said buffer information on a recording medium.
2. The image data recording apparatus according to  
claim 1, wherein said buffer occupation amount  
15 detection means outputs said buffer information for  
every recording unit of said coded image data.
3. The image data recording apparatus according to  
claim 2, further comprising error correction processing  
20 means for performing error-correction coding processing  
on said coded image data,  
wherein said recording means performs interleave  
processing by a plurality of error correction blocks  
and performs recording, and wherein said buffer  
25 occupation amount detection means outputs said buffer  
information by said plurality of error correction  
blocks for said interleave processing.

4. The image data recording apparatus according to claim 1, wherein said coding means encodes said image data by MPEG coding, with said buffer information as a value of a VBV (Video Buffer Verifier).

5. The image data recording apparatus according to claim 3, wherein said coding means encodes said image data by MPEG coding, and wherein said buffer occupation amount detection means outputs said buffer information by GOP (Group Of Pictures).

6. The image data recording apparatus according to claim 1, wherein said recording means records said coded image data and said buffer information in plural tracks formed on a tape type recording medium, such that said buffer information is recorded in a predetermined area of said plural tracks.

7. The image data recording apparatus according to claim 1, wherein said coding means encodes said image data by intra-frame coding and inter-frame prediction coding.

8. The image data recording apparatus according to claim 1, wherein said coding means controls the code

amount of said image data based on said buffer information.

9. An image data recording apparatus which records  
5 new image data, encoded by intra-frame coding and inter-frame prediction coding, on a tape type recording medium on which coded image data is already recorded, comprising:

coding means for encoding image data using a  
10 buffer memory;

buffer occupation amount detection means for, upon coding by said coding means, detecting a code amount of said image data occupying said buffer memory, and outputting buffer information related to the  
15 detected code amount of said image data; and

recording means for recording said coded image data and said buffer information on said tape type recording medium.

20 10. The image data recording apparatus according to claim 9, further comprising reproduction means for reproducing said image data and said buffer information from said tape type recording medium,

wherein said coding means performs coding  
25 processing on said new image data by using the buffer information reproduced by said reproduction means.

11. The image data recording apparatus according to claim 9, wherein said coding means controls the code amount of said new image data based on the buffer information reproduced from a position immediately  
5 before a recording start position of said new image data in said tape type recording medium.

12. An image data recording method comprising:  
a coding step of encoding image data using a  
10 buffer memory;  
a buffer occupation amount detection step of, upon coding at said coding step, detecting a code amount of said image data occupying said buffer memory, and outputting buffer information related to the  
15 detected code amount of said image data; and  
a recording step of recording said coded image data and said buffer information on a recording medium.

13. An image data recording method for recording new  
20 image data, encoded by intra-frame coding and inter-frame prediction coding, on a tape type recording medium on which coded image data is already recorded, comprising:

a coding step of encoding image data using a  
25 buffer memory;

a buffer occupation amount detection step of, upon coding at said coding step, detecting a code

amount of said image data occupying said buffer memory,  
and outputting buffer information related to the  
detected code amount of said image data; and

a recording step of recording said coded image  
5 data and said buffer information on said tape type  
recording medium.

14. A computer program for realizing an image data  
recording method by a computer, having program code  
10 corresponding to:

a coding step of encoding image data using a  
buffer memory;

a buffer occupation amount detection step of,  
upon coding at said coding step, detecting a code  
15 amount of said image data occupying said buffer memory,  
and outputting buffer information related to the  
detected code amount of said image data; and

a recording step of recording said coded image  
data and said buffer information on a recording medium.

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15. A computer program for realizing by a computer an  
image data recording method for recording new image  
data, encoded by intra-frame coding and inter-frame  
prediction coding, on a tape type recording medium on  
25 which coded image data is already recorded, having  
program code corresponding to:

a coding step of encoding image data using a buffer memory;

a buffer occupation amount detection step of, upon coding at said coding step, detecting a code  
5 amount of said image data occupying said buffer memory, and outputting buffer information related to the detected code amount of said image data; and

a recording step of recording said coded image data and said buffer information on said tape type  
10 recording medium.

16. A storage medium holding a computer program for realizing an image data recording method by a computer, wherein said computer program having program code  
15 corresponding to:

a coding step of encoding image data using a buffer memory;

a buffer occupation amount detection step of, upon coding at said coding step, detecting a code  
20 amount of said image data occupying said buffer memory, and outputting buffer information related to the detected code amount of said image data; and

a recording step of recording said coded image data and said buffer information on a recording medium.  
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17. A storage medium holding a computer program for realizing by a computer an image data recording method

for recording new image data, encoded by intra-frame coding and inter-frame prediction coding, on a tape type recording medium on which coded image data is already recorded, wherein said program having program

5 code corresponding to:

a coding step of encoding image data using a buffer memory;

a buffer occupation amount detection step of, upon coding at said coding step, detecting a code  
10 amount of said image data occupying said buffer memory, and outputting buffer information related to the detected code amount of said image data; and

a recording step of recording said coded image data and said buffer information on said tape type  
15 recording medium.